

***Remarks***

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-36 are pending in the application, with claims 1, 15, 22, 23, 27, and 34 being the independent claims. Claims 1, 27, and 34 are sought to be amended. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

***Allowed Claims***

Applicants acknowledge with gratitude the Examiner's allowance of claims 15-26.

***Allowable Claims***

In section 4 of the Office Action, claims 4-10, 13, and 30-33 were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In light of the remarks below with regard to their respective independent claims, Applicants assert that their independent claims are patentable, and thus respectfully request that the objection to claims 4-10, 13, and 30-33 be withdrawn and that these claims be passed to allowance.

***Rejections under 35 U.S.C. § 102***

**Claims 1, 11, 12, 14, and 34-36**

In section 1 of the Office Action, claims 1, 11, 12, 14, and 34-36 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,535,983 to McCormack *et al.* (hereinafter "McCormack"). Applicants respectfully traverse this rejection.

Independent claim 1, recites in part:

a relay, disposed on said substrate and connected between said input and said output of said substrate, said relay capable of being closed when substantially zero volts is applied to said relay; and  
wherein said relay is closed and said switch component is open when no power is applied to the communications device;  
*wherein said relay is closed when no power is applied to said relay.*

(*See* claim 1, as amended)

The Office Action relies on diode 72 of McCormack to allegedly disclose the relay recited in Applicants' claim 1. As recognized by the Office Action, "diode 72 is inherently capable of being closed when zero volts is applied to either the anode or cathode terminal *as long as appropriate bias is applied to the other terminal of the activated diode.*" (*See* Office Action, page 3). This can occur in McCormack because power supply 33, as shown in FIG. 5A, provides voltage and power to diode 72. (*See* McCormack, FIG. 5A)

However, the relay in Applicant's claim 1 is closed when *no power is applied to the communications device, and when no power is applied to the relay.* This can occur because the relay is configured to be naturally "on" (i.e., closed), and requires a control voltage to open. Accordingly, in contrast to McCormack, Applicants' communications

device does not require a power supply for the relay to be closed. Based on the above discussion, it is clear that McCormack does not disclose a communications device with a relay, as recited in Applicants' claim 1, as amended. Accordingly, McCormack does not teach each and every feature of claim 1, as amended, and therefore does not anticipate claim 1, as amended.

Moreover, claims 11, 12, and 14, which depend from independent claim 1, also distinguish over McCormack for reasons similar to those set forth above with respect to independent claim 1, as amended, and further in view of their own respective features.

Independent claim 34, as amended, calls for a relay, disposed on said substrate and connected between said input and said output of said substrate, said relay is substantially closed when no power is applied to said substrate, or to the relay. Accordingly, amended claim 34 is allowable over McCormack for at least reasons similar to those set forth above with respect to independent claim 1, as amended. Furthermore, claims 35-36, which depend from independent claim 34, also distinguish over McCormack for reasons similar to those set forth above with respect to independent claim 34, as amended, and further in view of their own respective features.

Based on the discussion above, Applicants assert that McCormack does not teach each and every feature of claims 1 or 34, and therefore does not anticipate amended claims 1 and 34. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 102 of claim 1 and 34, and that these claims and their respective dependent claims be passed to allowance.

***Rejections under 35 U.S.C. § 103***

**Claims 2, 3, and 27-29**

In section 2 of the Office Action, claims 2, 3, and 27-29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over McCormack in view of U.S. Patent No. 5,886,925 to Campardo *et al.* (hereinafter "Campardo"). Applicants respectfully traverse this rejection.

Applicants assert that a *prima facie* case of obviousness has not been established for at least the reason that the combination of McCormack and Campardo does not teach or suggest each and every feature of the claims.

Claims 2 and 3 distinguish over McCormack for reasons similar to those set forth above with respect to independent claim 1, as amended, and further in view of their own respective features. Moreover, Applicants assert that Campardo does not provide the teachings missing from McCormack. Thus, Applicants assert that claims 2 and 3 are patentable over McCormack and Campardo, alone or in any rational combination. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 2 and 3.

Independent claim 27 calls for a switchable termination, disposed on said substrate and across an output of said filter, said termination adapted to provide a constant input impedance at an input of said filter when said filter is disconnected from said input.

The Examiner relies on resistor 66 shown in figure 4 of McCormack to allegedly teach the switchable termination of Applicants' claim 27. The Examiner further relies on Zener diode 36 shown in figure 2 of McCormack to allegedly teach the filter of

Applicants' claim 27. However, the Office Action does not even allege that the combination of McCormack and Campardo teaches or suggests said termination adapted to provide a constant input impedance at an input of said filter, as set forth in Applicants' claim 27. Nevertheless, Applicants assert that at least this feature is missing from the combination of McCormack and Campardo.

In McCormack, current flows through resistor 66 during the detection phase, as described with reference to figure 5A of McCormack. The current that flows through resistor 66 alternates from a near zero current to a programmable current draw. McCormack, Col. 9, lines 28-30. These two currents are based on the two different voltages that are applied to end device 12". McCormack, Col. 7, line 38 - Col. 8, line 6; Col. 8, lines 54-61; Col. 9, lines 26-36. Applicants assert that the input impedance of end device 12" will change when the voltage that is applied to end device 12" changes. Accordingly, McCormack fails to teach said termination adapted to provide a constant input impedance at an input of said filter, as set forth in Applicants' claim 27.

For example, it is well known in the art that changing the voltage across a transistor, such as pnp transistor 62 or npn transistor 64 in figure 4 of McCormack, changes the current that flows through the transistor. The relationship between the voltage and the current is non-linear, such that changing the voltage across the transistor changes the impedance of the transistor. Thus, resistor 66 clearly is not adapted to provide a constant input impedance at an input of Zener diode 36, and nothing in McCormack even suggests that resistor 66 is so adapted.

The Examiner contends in the Advisory Action that the impedance of the filter in Applicants' claim 27 would change in the event of saturation. The Examiner further

contends that the claim language therefore cannot be said to not read on the McCormack reference and be supported by the Applicants' specification. However, claim 27, as amended, calls for a switchable termination adapted to provide a constant input impedance at an input of said filter when said filter is disconnected from said input. Thus, Applicants assert that the Examiner's contention cannot stand.

Applicants assert that Campardo does not provide the teachings missing from McCormack. Therefore, Applicants assert that claim 27, as amended, is patentable over McCormack and Campardo, alone or in any rational combination.

Moreover, Applicants assert that a *prima facie* case of obviousness has not been established in the Office Action for the additional, independent reason that the cited art does not include a suggestion or motivation of the desirability of the combination of McCormack and Campardo. *See* M.P.E.P. § 2143.01. In fact, Applicants assert that McCormack *teaches away* from combination with Campardo.

In section 2 of the Office Action, the Examiner alleges that the use of a native FET diode is motivated based on its low threshold voltage, which reduces the voltage requirements of end device 12". However, McCormack specifically states that a stimulus voltage "of at least 1.2 volts or more" must be provided by the network side because a very low voltage (e.g., below 1.2 volts) is so low that many semiconductor devices won't conduct. McCormack, Col. 5, lines 57-59. Requiring a voltage of at least 1.2 volts so that a device will conduct is not the same as, and in fact teaches away from, using a native transistor, which is turned on even when little or no voltage (or power) is applied thereto.

Furthermore, the M.P.E.P. specifically states, "If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." *See* M.P.E.P. § 2143.01.

Applicants assert that modifying end device 12" of McCormack to include the native transistors of Campardo renders end device 12" unsatisfactory for its intended purpose.

Applicants further assert that replacing diodes 72 and 74 of McCormack with the native transistors of Campardo would cause load 33 in McCormack to be electrically coupled in parallel with indication circuitry 60, whether or not voltage (or power) is applied to end device 12". Thus, load 33 and indication circuitry 60 would be coupled in parallel during the detection phase and during the operation phase, preventing end device 12" from properly performing either phase. Therefore, replacing diodes 72 and 74 with native devices clearly renders end device 12" of McCormack unsatisfactory for its intended purpose.

Moreover, claims 28 and 29, which depend from independent claim 27, also distinguish over McCormack and Campardo, alone or in any rational combination, for reasons similar to those set forth above with respect to independent claim 27, as amended, and further in view of their own respective features.

Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 27-29.

***Conclusion***

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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